Claims:

1.   A method of operating an image capture apparatus comprising at least one processor; at least one memory, and an image capture device having an image capture area in which images placed in said area are captured as

5   digital image data, to capture a document image having physical area greater than said image capture area, said method comprising the steps of:

receiving an input instruction signal instructing said apparatus to adopt an image capture mode, in which said apparatus captures a first image data

10   followed by a second image data;

capturing said first image data, said first image data corresponding with a first portion of said document;

15   capturing said second image data, said second image data corresponding with a second portion of said document, wherein said first and second portions of said document comprise a whole of one side of said document;

processing said first image data to adjust a scale of said first image data;

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processing said first image data to detect features of said first image data;

processing said second image data to adjust a scale of said second image data;

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matching said first image data with said second image data;

combining said first and second image data to produce a combined full image data representing said image having greater physical area than said image

30   capture area.

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2. The method as described in claim 1, further comprising the step of waiting for a user input after said capture of said first image data.

3. A method of using a flat bed image capture apparatus having an image capture area in which images placed in said area are captured as digital image data, said image capture area being of a first substantially quadrilateral shape having first and second shorter edges opposing each other, and third and fourth longer edges opposing each other and extending between said first and second shorter edges, for capturing a document image of an area of one side of a two sided document, said area having a second substantially quadrilateral shape of area greater than said image capture area, said document image area having first and second shorter document edges opposing each other, and third and fourth longer document edges opposing each other and extending between said first and second document edges, said method comprising the steps of:

positioning said first edge of said document substantially abutting said first edge of said image capture area such that said document is placed on said image capture area in a first orientation;

activating said image capture apparatus to perform a first image capture operation for capturing a first image data of said document in said first orientation;

repositioning said document relative to said image capture area such that said document is placed in a second orientation in which a second portion of said document overlaps said image capture scan;

activating said image capture apparatus to perform a second image capture operation for capture of a second image data of said document which overlaps said first image data.

4. The method as claimed in claim 3, wherein said step of repositioning said document comprises rotating said document such that said second edge of said document substantially abuts said first edge of said image capture area in a second orientation of said document relative to said image
5 capture area.

claim 4

5. The method as claimed in claim 3, wherein said step of rotating said document comprises rotating said document by approximately 180 °.

10 6. The method as claimed in claim 3, wherein said step of repositioning said document into said second orientation comprises applying a linear translation of said document relative to said image capture area, from said first orientation.

15 7. A method of operating an image capture apparatus comprising at least one processor, at least one memory, and an image capture device having an image capture area in which images placed in said area are captured as digital image data, to capture a document image having physical area greater than said image capture area, said method comprising the steps of:

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receiving an input instruction signal instructing said apparatus to adopt an image capture mode in which said apparatus captures a first image data followed by a second image data followed by a third image data;

25 capturing said first image data, said first image data corresponding with a first portion of said document;

capturing a second image data, said second image data corresponding with a second portion of said document;

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capturing a third image data, said third image data corresponding with a third portion of said document, wherein said first and second and third portions of said document comprise a whole of one side of said document;

5   processing said first image data to adjust a scale of said first image data;

processing said second image data to adjust a scale of said second image data;

10   processing said third image data to adjust a scale of said third image data;

processing said first image data to detect features of said first image data;

matching said first image data with said second image data;

15   combining said first image data and said second image data to produce a first combined image data;

processing said second image data to detect features of said second image

20   data;

matching said second image data with said third image data;

applying a transform to said matched second and third image data to produce a transform image data;

25   combining said transform image data with said first combined image data to produce a combined image data representing said document image having area greater than said image capture area.

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8.   The method as claimed in claim 7, further comprising the step of, prior to said step of capturing a first image data, configuring said image capture apparatus to perform a first image capture operation.

5   9.   The method as claimed in claim 7, further comprising the step of:

prior to said step of capturing a second image data, configuring said image capture apparatus to perform a second image capture operation.

10   10.   The method as claimed in claim 7, further comprising the step of, prior to said step of capturing a third image data, configuring said image capture apparatus to perform a third image capture operation.

11.   The method as claimed in claim 7, comprising the steps of:

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after said step of capturing a first image data waiting for input of a first user signal before said step of capturing a second image data; and

after said step of capturing a second image data waiting for input of a second user signal before said step of capturing a third image data.

12.   The method as claimed in claim 7, wherein said step of processing said first image data to adjust a scale of said first image data occurs simultaneously with said step of capturing said second image data.

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13.   The method as claimed in claim 7, wherein said step of processing said second image data to adjust the scale of said second image data is carried out simultaneously with said step of capturing a third image data.

14.   The method as claimed in claim 7, wherein said step of processing said first image data to detect features of said first image data is carried out simultaneously with said step of capturing a second image data.

5   15.   The method as claimed in claim 7, wherein said step of processing said second image data to detect features of said second image data is carried out simultaneously with said step of capturing a third image data.

16.   The method as claimed in claim 7, wherein a said step of matching
10   a said image data with another said image data is carried out simultaneously with a said step of capturing a said image data.

17.   A method of using a flat bed image capture apparatus having an image capture area in which images placed in said area are captured as digital
15   image data, said image capture area being of a first substantially quadrilateral shape having first and second shorter edges opposing each other, and third and fourth longer edges opposing each other and extending between said first and second shorter edges, for capturing an image of an area of one side of a two sided document said area having a second substantially quadrilateral shape of
20   area greater than said image capture area, said document area having first and second shorter document edges opposing each other, and third and fourth longer document edges opposing each other and extending between said first and second document edges, said method comprising the steps of:

25   positioning said document in a first orientation relative to said image capture area such that said first longest edge of said document is substantially parallel to said first shortest edge of said image capture area;

aligning said first shortest edge of said document with said first longest edge of said image capture area such that a first end portion of said document overlaps said image capture area;

5   activating said image capture apparatus to perform a first image capture operation for capturing a first image data of said document in said first orientation;

positioning said document in a second orientation in which said first longest edge of said document is substantially parallel to said first shortest edge of said

10   image capture area, and a substantially central portion of said document overlaps said image capture area;

activating said image capture apparatus to perform a second image capture operation for capturing a second image data of said document in said second

15   orientation;

positioning said document in a third orientation such that said first longest edge of said document is substantially parallel to said first shortest edge of said image capture area, and a said second shortest edge of said document lies

20   adjacent said second longest edge of said image capture area, such that a third portion of said document corresponding to a second end of said document overlaps said image capture area; and

activating said image capture apparatus to perform a third image capture

25   operation for capturing a third image data of said document in said third orientation.

18.   The method as claimed in claim 17, wherein said second and third orientations comprise linear translations of said document relative to said image

30   capture area from said first orientation.

19.   The method as claimed in claim 17, wherein:

said step of positioning said document in said first orientation is followed by

5   said first activation step;

said second step of positioning said document follows said first activation

step;

10   said second activation step follows said second positioning step;

said third positioning step follows said second activation step; and

said third activation step follows said third positioning step.

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20.   An image capture apparatus comprising:

at least one data processor;

20   at least one memory;

a detector for capturing an image of an object presented in an image

capture area of predetermined size;

25   a user interface for activating said detector to perform a series of image

data capture operations; wherein said user interface comprises, wherein said

image capture apparatus can be activated to perform an operation for capture of

two successive images in series, and said image capture apparatus can be

activated to perform an operation for capture of three successive images in

30   series; and

an image processor for processing a plurality of successive said captured images to combine said plurality of successive images into a combined image data representing a full image, of which said plurality of image data are sub-
5   images.

21.   The image capture apparatus as claimed in claim 20, wherein said user interface comprises a plurality of switches operable by a human hand.

10   22.   The image capture apparatus as claimed in claim 20, wherein said user interface comprises;

a dialogue box displayed on a visual display unit, said dialogue box having selectable icons for selecting a two-step image capture process, and a three-step
15   image capture process.

23.   The apparatus as claimed in claim 20, wherein said user interface comprises a dialogue box displayed on a visual display unit comprising said apparatus, said visual display unit comprising;

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an icon for activating a first image capture operation of a two-step image capture process;

an icon for operating a second image capture process of said two-step
25   image capture operation;

a visual display representing a positioning of a document a first step of said two-step image capture process; and

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a display representing a positioning of said document for a second step of said two-step image capture process.

24.   The method as claimed in claim 20, wherein said user interface comprises a dialogue box presented on a visual display unit of said image capture apparatus, said dialogue box comprising;

    an icon for activating a first step of a three-step image capture process;

    an icon for activating a second step of a three-step image capture process;

    an icon for activating a third step of said three-step image capture process;

    a first icon representing graphically a positioning of a document on said image capture apparatus for performing said first step of said three-step image capture process;

    a second icon representing a second positioning of said document for operation of a second step of said three-step image capture process; and

    a third icon representing a third positioning of said document for a third step of said three-step image capture process.

25.   An image capture apparatus comprising:

    at least one data processor;

    at least one memory;

a detector for capturing an image of an object presented in an image capture area of predetermined size;

a user interface for activating said image capture means to perform a series

5   of image data capture operations; wherein said data processor is adapted as

an image processor for processing a succession of said captured images to combine said plurality of successive images into a combined image data representing a full image;

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a feature detector for detecting a plurality of features of a said image data;

a matcher for matching a first said image data with a second said image data; and

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a data combiner for combining a first said image data with a second said image data to produce a combined image data representing an image captured partially by said first image data and partially by said second image data.